

OIPE

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/005,921

DATE: 12/17/2001

TIME: 12:21:12

Input Set : A:\PTO.DC.txt

Output Set: N:\CRF3\12172001\J005921.raw

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4 <110> APPLICANT: Allen, Keith D.
5   Leviten, Michael W.
7 <120> TITLE OF INVENTION: TRANSGENIC MICE CONTAINING CASH GENE
8   DISRUPTIONS
10 <130> FILE REFERENCE: R-714
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/005,921
C--> 12 <141> CURRENT FILING DATE: 2001-12-04
12 <150> PRIOR APPLICATION NUMBER: US 60/254,902
13 <151> PRIOR FILING DATE: 2000-12-11
15 <160> NUMBER OF SEQ ID NOS: 4
17 <170> SOFTWARE: FastSEQ for Windows Version 4.0
19 <210> SEQ ID NO: 1
20 <211> LENGTH: 2770
21 <212> TYPE: DNA
22 <213> ORGANISM: Mus musculus
24 <400> SEQUENCE: 1
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26 ctgtggttct gaacatggcc cagagccctg tgtctgccga ggtcattcac cagggtggaag 120
27 agtgtcttga tgaagacgag aaggagatga tgctcttctt gtgtagagat gtgactgaga 180
28 acctggctgc acctaacgtc agggacctcc tggatagctt aagttagaga ggccagctct 240
29 cttttgctac cttggctgaa ttgctctaca gagttaggag gtttgacctt ctcaagagga 300
30 tcttgaagac agacaaagca accgtggagg accacctgcg cagaaaccct cacctgggtt 360
31 ctgattatag ggtcctgctg atggagattg gtgagagctt agatcagaac gatgtatcct 420
32 ccttagtttt ccttacaagg attacaaggg attacacagg cagaggcaag atagccaagg 480
33 acaagagttt cttggatctg gtgattgaat tggagaaact gaatctaatt gcttcagacc 540
34 aattgaattt gttagaaaaa tgcctgaaga acatccacag aatagacttg aacacaaaga 600
35 tccagaagta caccagtcac agccaaggag caagatcaaa tatgaatact ctccaggctt 660
36 cgctcccaaa attgagtatc aagtataact caaggctcca gaatgggcga agtaaagagc 720
37 caagatttgt ggaataacct gacagtcaaa gaacactggt gaagacatcc atccaggaat 780
38 caggagcttt tttacctccg cacatccgtg aagagactta caggatgcag agcaagcccc 840
39 taggaatctg cttgatcatt gattgtattg gcaacgcacac aaaatatctt caagagacct 900
40 tcacttccct gggctatcat atccagcttt tcttgtttcc caagtcacat gacataaccc 960
41 agattgttcg ccgatatgca agtatggccc aacatcaaga ctatgacagc tttgcatgtg 1020
42 ttctgggtgag cctaggaggc tcccaaagca tgatgggcag agatcaagtt cactcagggt 1080
43 tctccttgga tcatgtcaag aacatgttca cgggggacac gtgcccttct ctcaagagga 1140
44 agccaaagct cttttttatt cagaactatg agtcgttagg tagccagttg gaagatagca 1200
45 gcctggaggt agatgggcca tcaataaaaa atgtggactc taagcccctg caaccagac 1260
46 actgcacaac tcaccagaa gctgatatct tttggagcct gtgcacagca gacgtatctc 1320
47 acttgagaa gccctccagc tcactctctg tgtatctgca gaagctctcc cagcagctga 1380
48 agcaaggcag gagacgcca ctctggacc tccacgttga actcatggac aaagtgtatg 1440
49 cgtggaacag tgggtgttctg tctaaggaga aatacagcct cagcctgcag cacactctga 1500
50 ggaagaaact catcctggct cctacgtgag aacccagac cggttggtgtt cttggtatat 1560
51 catccagggt ggcggttg agcagagctt ggcggttacg gctgcttctg gctgcttctg 1620
52 gctctgccgt gagtccctggc ctagggttct cctgtgcaca ggcagagcc gtaaccctgt 1680
53 gcctgggaaa cgtctcactc ccgcccgtt gcctttacct ctctaaactt ccctacttac 1740
54 attccttagt cggatgtttt gccagagttt ggagaacagt aagacataaa cctattgttt 1800
55 gtttgttttt ttggggggga ggttatctac caagttatag caagttattg tatgggtgta 1860

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56 tagtgtatag tgggtcaaga ttctgaatgt aacttgagac ttacctgagt ttgtcatgcg 1920
57 actgggtaaa ttgtttctat ggcacatcta atcatttaat aagtaattac ctcattaagt 1980
58 acccattgct tcaggacttt cacattggcc accaattttct gtgacccagc tccacattta 2040
59 tattctcttt cggcaaaacc aaatttcatt atgtctgttt aatatctaca gtctaagtct 2100
60 ttgtaagaca tctagatagg aaaaatagtt acccatgagc acaggagggc tggcctgacc 2160
61 ctcaccagct gtgcagtggc ttcggtgaaa ggagaatgag ccctactcct tgaaagggtt 2220
62 tagtgcttgg gagagcagtc tgtaccttgc ctgggcagca cagtagagcc agccccaaga 2280
63 acacaacagt gagtggggga gcttgccctg gttggctcag gatcaggaaa caggagggat 2340
64 gaccaacttg gggctttgag gtggcccacc ccagcatcca tatcatctgt gaactgccag 2400
65 agcctgtgaa ggggcgggtc ctgtagaact aaggctgcag gatctccatg acacagggca 2460
66 acaacagggc atctgagaag ggtcccctg agggctcagc atttatagtg caccagaagc 2520
67 cagagggctc ggatcagaca atgaccatt gcactgagta aagatgtaag tgaatgagtg 2580
68 aagatgtgtg ggcacacgga aatactgagg gacacacaca agcttttatg gagatgtttg 2640
69 tttgtttgtt tgtttgtttt ttgtttcttt ggcaggaaca gattgcaagg gcagagagta 2700
70 gataaggaag ctggagacat gagtgggggtt ggggtgcatga tatagaattc acaaagaaaa 2760
71 aaaaaaaaaa 2770

73 <210> SEQ ID NO: 2
74 <211> LENGTH: 484
75 <212> TYPE: PRT
76 <213> ORGANISM: Mus musculus
78 <400> SEQUENCE: 2
79 Met Ala Gln Ser Pro Val Ser Ala Glu Val Ile His Gln Val Glu Glu
80 1 5 10 15
81 Cys Leu Asp Glu Asp Glu Lys Glu Met Met Leu Phe Leu Cys Arg Asp
82 20 25 30
83 Val Thr Glu Asn Leu Ala Ala Pro Asn Val Arg Asp Leu Leu Asp Ser
84 35 40 45
85 Leu Ser Glu Arg Gly Gln Leu Ser Phe Ala Thr Leu Ala Glu Leu Leu
86 50 55 60
87 Tyr Arg Val Arg Arg Phe Asp Leu Leu Lys Arg Ile Leu Lys Thr Asp
88 65 70 75 80
89 Lys Ala Thr Val Glu Asp His Leu Arg Arg Asn Pro His Leu Val Ser
90 85 90 95
91 Asp Tyr Arg Val Leu Leu Met Glu Ile Gly Glu Ser Leu Asp Gln Asn
92 100 105 110
93 Asp Val Ser Ser Leu Val Phe Leu Thr Arg Ile Thr Arg Asp Tyr Thr
94 115 120 125
95 Gly Arg Gly Lys Ile Ala Lys Asp Lys Ser Phe Leu Asp Leu Val Ile
96 130 135 140
97 Glu Leu Glu Lys Leu Asn Leu Ile Ala Ser Asp Gln Leu Asn Leu Leu
98 145 150 155 160
99 Glu Lys Cys Leu Lys Asn Ile His Arg Ile Asp Leu Asn Thr Lys Ile
100 165 170 175
101 Gln Lys Tyr Thr Gln Ser Ser Gln Gly Ala Arg Ser Asn Met Asn Thr
102 180 185 190
103 Leu Gln Ala Ser Leu Pro Lys Leu Ser Ile Lys Tyr Asn Ser Arg Leu
104 195 200 205
105 Gln Asn Gly Arg Ser Lys Glu Pro Arg Phe Val Glu Tyr Arg Asp Ser
106 210 215 220

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```

107 Gln Arg Thr Leu Val Lys Thr Ser Ile Gln Glu Ser Gly Ala Phe Leu
108 225                230                235                240
109 Pro Pro His Ile Arg Glu Glu Thr Tyr Arg Met Gln Ser Lys Pro Leu
110                245                250                255
111 Gly Ile Cys Leu Ile Ile Asp Cys Ile Gly Asn Asp Thr Lys Tyr Leu
112                260                265                270
113 Gln Glu Thr Phe Thr Ser Leu Gly Tyr His Ile Gln Leu Phe Leu Phe
114                275                280                285
115 Pro Lys Ser His Asp Ile Thr Gln Ile Val Arg Arg Tyr Ala Ser Met
116 290                295                300
117 Ala Gln His Gln Asp Tyr Asp Ser Phe Ala Cys Val Leu Val Ser Leu
118 305                310                315                320
119 Gly Gly Ser Gln Ser Met Met Gly Arg Asp Gln Val His Ser Gly Phe
120                325                330                335
121 Ser Leu Asp His Val Lys Asn Met Phe Thr Gly Asp Thr Cys Pro Ser
122                340                345                350
123 Leu Arg Gly Lys Pro Lys Leu Phe Phe Ile Gln Asn Tyr Glu Ser Leu
124                355                360                365
125 Gly Ser Gln Leu Glu Asp Ser Ser Leu Glu Val Asp Gly Pro Ser Ile
126 370                375                380
127 Lys Asn Val Asp Ser Lys Pro Leu Gln Pro Arg His Cys Thr Thr His
128 385                390                395                400
129 Pro Glu Ala Asp Ile Phe Trp Ser Leu Cys Thr Ala Asp Val Ser His
130                405                410                415
131 Leu Glu Lys Pro Ser Ser Ser Ser Ser Val Tyr Leu Gln Lys Leu Ser
132                420                425                430
133 Gln Gln Leu Lys Gln Gly Arg Arg Arg Pro Leu Val Asp Leu His Val
134                435                440                445
135 Glu Leu Met Asp Lys Val Tyr Ala Trp Asn Ser Gly Val Ser Ser Lys
136 450                455                460
137 Glu Lys Tyr Ser Leu Ser Leu Gln His Thr Leu Arg Lys Lys Leu Ile
138 465                470                475                480
139 Leu Ala Pro Thr
143 <210> SEQ ID NO: 3
144 <211> LENGTH: 200
145 <212> TYPE: DNA
146 <213> ORGANISM: Artificial Sequence
148 <220> FEATURE:
149 <223> OTHER INFORMATION: Targeting Vector
151 <400> SEQUENCE: 3
152 cctgtgcttt gactctcaag cctaagtgtt ttgataagag gattctcttt caccacagag 60
153 tgtctctatt gcaagaactc tgagagaaat gaagagagtc ctcagcaatg atgttggtt 120
154 ctctgtggtt ccagagccct gcttaatgga tggagactgg acgagaacct ggctgctgtg 180
155 gttctgaaca tggcccagag
157 <210> SEQ ID NO: 4
158 <211> LENGTH: 200
159 <212> TYPE: DNA
160 <213> ORGANISM: Artificial Sequence
162 <220> FEATURE:

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163 <223> OTHER INFORMATION: Targeting Vector

165 <400> SEQUENCE: 4

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166 cttggctgaa ttgctctaca gagtgaggcg gtttgacctt ctcaagagga tcttgaagac 60
167 agacaaagca accgtggagg accacctgcg cagaaaccct cacctgggtt ctgattatag 120
168 gtaagtcac ccctggggga ggggagaggg agtctagatg gttagggcag tgagaagacc 180
169 ccattgcttc ctctctctc                                     200
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VERIFICATION SUMMARY

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Input Set : A:\PTO.DC.txt

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L:12 M:270 C: Current Application Number differs, Replaced Current Application No  
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date